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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,147	03/10/2004	Gary Peter Moscaluk	CYP-0403	4329

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LAW OFFICE OF DALE B. HALLING  
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EXAMINER

NGUYEN, HIEP

ART UNIT PAPER NUMBER

2816

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/797,147

Applicant(s)

MOSCALUK ET AL.

Examiner

Hiep Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States. .

Claims 1-3 and 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Denham et al. (US Pat. 5,557,225).

Regarding claims 1-3, 7 and 8, figure 5 of Denham show a signal transmission amplifier circuit comprising: a transmission gate (524); a cross coupled latch (525, 526); a reference signal generating circuit (510) coupled to the cross coupled latch. The strobe signal is signal (514) that is coupled to the transmission gate (524) and to the cross coupled latch (525, 526) Signal (512) is a single ended input. The input of the transmission gate (525, 526) is coupled to a transmission line.

Regarding claims 9-11 figure 5 of Denham show a signal transmission amplifier circuit comprising: a transmission gate (524) having an input; and a latch (525, 526) coupled to an output of the transmission gate having a reference input. Latch (525,526) is a cross coupled latch. The transmission gate (524) is coupled to strobe signal (514) and the inverted strobe signal.

Regarding claims 12-14, when the input signal has a voltage that is less than the threshold voltage of the PMOS transistor inherently included in the latch (525, 526), the PMOS transistor is turned on and the input signal is latched. The cross coupled latch is coupled to a strobe signal (514). The reference circuit has a second latch (528) generating the reference input signal.

Regarding claims 15-20, figure 5 of Denham shows a signal transmission amplifier circuit comprising: a cross coupled latch (525, 526) having an input; and a reference voltage generating circuit (510). The transmission gate is element (524) that is coupled between the input of the cross coupled latch (525, 526) and the input signal (512). The transmission gate is also coupled between the reference voltage generating

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circuit (510) and the cross coupled latch (425, 526). The reference generating circuit (510) includes a latch (528). The input signal (512) is a single ended signal.

Claims 1-3 and 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kojima et al.(US Pat. 6,437,624).

Regarding claims 1-3, 7 and 8, figure 3 of Kojima shows a signal transmission amplifier circuit comprising: a transmission gate (N8) coupled to an input signal (D/); a cross coupled latch (I12, I14); a reference signal generating circuit (I9, I10, I11, N7, N9, P5, P6) coupled to the cross coupled latch. The strobe signal is signal (C) that is coupled to the transmission gate (N8) and to the cross coupled latch (I12, I14). Signal (D/) is a single ended input. The input of the transmission gate (N8) is coupled to a transmission line.

Regarding claims 9-11 figure 3 of Kojima shows a signal transmission amplifier circuit comprising: a transmission gate (N8) having an input; and a latch (I12, I14) coupled to an output of the transmission gate having a reference input. Latch (I12, I14) is a cross coupled latch. The transmission gate (N8) is coupled to strobe signal (C) and the inverted strobe signal.

Regarding claims 12-14, when the input signal has a voltage that is less than the threshold voltage of the PMOS transistor inherently included in the latch (I12, I14), the PMOS transistor is turned on and the input signal is latched. The cross coupled latch is coupled to a strobe signal (C). The reference circuit has a second latch (P5, P6).

Regarding claims 15-20, figure 3 of Kojima shows a signal transmission amplifier circuit comprising: a cross coupled latch (I12, I14) having an input; and a reference voltage generating circuit (I9, I10, I11, N7, N9, P5, P6). The transmission gate is element (N8) that is coupled between the input of the cross coupled latch (I12, I14) and the input signal (D/). The transmission gate is also coupled between the reference voltage generating circuit and the cross coupled latch. The reference generating circuit includes a latch (P5, P6). The input signal (D/) is a single ended signal.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denham et al. (US Pat. 5,557,225).

Regarding claim 4 and 5, figure 5 of Denham includes all the limitations of claims 4 and 5. The reference generating circuit (510) includes an inverter (520). Inverter (520) of Denham has a functional operation equivalent to the inverter (84) of the present application. The difference between these two inverters is that inverter (520) is not a schmitt trigger. However, it is old and well known to those skilled in the art that a schmitt trigger is an inverter that has hysteresis for preventing fault triggering of the input signal due to noise. Therefore, it would have been obvious to those skilled in the art at the time the invention was made to replace the inverter (520) of Denham with a schmitt trigger inverter for preventing fault triggering of the input signal due to noise.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (US Pat. 6,437,624).

Regarding claim 4 and 5, figure 3 of Kojima includes all the limitations of claims 4 and 5. The reference generating circuit (I9, I10, N7, N9, P5, P6) includes an inverter (I9). Inverter (I9) of Kojima has a functional operation equivalent to the inverter (84) of the present application. The difference between these two inverters is that inverter (520) is not a schmitt trigger. However, it is old and well known to those skilled in the art that a schmitt trigger is an inverter that has hysteresis for preventing fault triggering of the input signal due to noise. Therefore, it would have been obvious to those skilled in the art at the time the invention was made to replace the inverter (I9)

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of Kojima with a schmitt trigger inverter for preventing fault triggering of the input signal due to noise.

Regarding claim 6, the second transmission gate is element (N10).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

03-11-05



TUAN T. LAM  
PRIMARY EXAMINER